

1 Title: DYNAMIC DSP ALLOCATION FOR UNIVERSAL ACCESS TO A
2 PACKET NETWORK

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5 BACKGROUND OF THE INVENTION

6 1. Field of the Invention

7 The present invention relates generally to digital signal processors used for
8 allocation of resources. More particularly, the present invention is a gateway that controls
9 and allocates a single function for each digital signal processor in a flexible manner to
10 implement a multi-function system for transmitting Time Division Multiplexed (TDM)
11 telecommunications over a packet network.

12 2. Background Information

13 As telecommunication technology advances, the demand for cheaper, better, and
14 more telecommunication services increases. In the past, separate telephone and facsimile
15 lines were sufficient for a business. Today, separate telephone and facsimile lines are
16 insufficient even for a residence. In today's society, businesses and residences need
17 separate telephone, facsimile, and data lines just to keep up with technology.

18 Thus, as the demands for telecommunication services rise, so does the demand for
19 more telecommunications lines. As society continues to become computer savvy, the
20 demand for more telecommunication lines is becoming an increasing problem. In short,
21 present day telecommunication demands are becoming harder to meet.

22 To meet some of society's needs, businesses and residences are turning to
23 alternative telecommunication services, such as satellite services, instead of the traditional
24 means, i.e., telephone lines. However, even these alternative telecommunication services